National Environmental Satellite, Data, and Information Service
Critical Infrastructure for Satellite Control & Data Centers

Fairbanks Command & Data Acquisition Station

NESDIS Satellite Data Receiving Antenna at the Wallops, Va. Command and Data Acquisition Station

NESDIS 26 m Antenna

NESDIS 13 m Antennas

The National Requirement: The Nation must possess the facilities and infrastructure required to support civilian environmental satellite requirements to provide real-time weather, environmental data, and information products that are key to the prediction and monitoring of weather, climate, and natural and environmental events. The impact of this information significantly affects many key industries and is an integral part of the system that is responsible for ensuring the safety of the Nation. This activity ensures that our Nation possesses secure and reliable sources of satellite data that allows the National Weather Service to provide accurate weather forecasts, and provides satellite data to other key Government (military and civilian) and private sector users. Loss of this data significantly reduces the accuracy of severe weather pattern predictions, leading to higher probabilities of significant loss of life and property damage.

NOAA's Response: NESDIS has developed a multi-year program to continue the current 99.9-percent data availability from NESDIS satellite systems by reducing the risk of outages and service disruptions caused by failure of supporting infrastructure at NESDIS ground support facilities. This program minimizes the risk of data or spacecraft loss due to catastrophic ground systems failures.

NESDIS maintains Command and Data Acquisition (CDA) Stations and a Satellite Operations Control Center to command and acquire data from NOAA satellites. The Stations located at Wallops, Virginia; near Fairbanks, Alaska; and in Suitland, Maryland, compose the backbone of the ground systems that support spacecraft programs. On average, these processing facilities are 45-years old. The Satellite CDA Infrastructure program forms the basis for a planned, cohesive renovation and modernization of the facilities, infrastructure, and equipment, and eliminates fire, safety, and hazardous materials deficiencies at the facilities.

The Fairbanks facility operates in severe climate conditions with temperatures during the winter months reaching -60 degrees Fahrenheit, and lies within a seismic zone. The Wallops facility, on the Atlantic coast, is subject to a corrosive salt air environment and the potential of hurricane force winds. Investment in these facilities has not been adequate to ensure sufficient reliability to support mission requirements. Major systems at both facilities are also operating well past their design lives and require maintenance, repair, and replacement. The continuation of this multi-year program will support the repair and replacement of existing structures with structures specifically designed to continue the successful support of NESDIS spacecraft operations.

Financing: The FY 2003 Budget includes $4.55 million for the Satellite CDA Infrastructure program. NESDIS will undertake projects to protect critical equipment to further minimize the risk of spacecraft loss and data loss and provide NOAA with the capability, redundancy, and robustness within its satellite command and data acquisition system infrastructure to continue supporting worldwide requirements for critical operational satellite data and services.